CRC; patients are now expected to survive longer and have the potential to experience various side effects related to chemotherapy. Knowing how patients value the outcomes and preferences of treatment options for CRC is important to oncologists and policy makers in planning and introducing treatment interventions. **METHODS:** Qualitative interviews with 27 CRC patients were used to identify seven treatment attributes and their levels with regard to chemotherapy for CRC, for inclusion in a discrete choice experiment (DCE) survey. These attributes were: life expectancy, fatigue, diarrhoea, oral symptoms, hair loss, pain, and nausea and vomiting. The survey was completed by 150 CRC patients to assess their preferences for the treatment of CRC. A conditional logit model was used to analyse the data using STATA v9.0. **RESULTS:** The results of the DCE survey showed that, with the exception of oral symptoms, all other attributes were found to be important factors when it came to treatment decisions made by participants. The results confirmed the prior hypothesis about the directions of attributes. For example, life expectancy had a positive coefficient value, which indicated that the greater the life expectancy, the more likely a participant would be to prefer that treatment. In contrast, the negative values for pain, diarrhoea, fatigue, nausea and vomiting, and hair loss indicate that participants would not prefer a treatment that produce these toxicities. Patients preferred to trade-off life expectancy for the reduction in the likelihood of specific side effects. **CONCLUSIONS:** The results indicate the types of risks and benefits that are important to patients with treatments for CRC. The findings are likely to assist health care professionals in prioritising issues that need to be discussed during treatment consultations.

PCN85

CANCER PATIENTS' PERCEPTION TOWARDS THE USE OF TRADITIONAL & COMPLEMENTARY MEDICINES (T&CM) FOR CANCER TREATMENT: A QUALITATIVE STUDY

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OBJECTIVES: This research study aimed to investigate the perception of cancer patients towards the use of Traditional & Complementary Medicines (T&CM) for cancer treatment. **METHODS:** Qualitative methodology was adapted to collect in-depth information from consented cancer patients who were recruited from the oncology wards at Penang General Hospital from May 2010 to August 2010. After obtaining institutional ethical approval, patients with different types of cancer and stages from the three major ethnic groups in Malaysia namely Malay, Chinese and Indians were approached. Twenty semi-structured interviews were conducted after obtaining informed consent. All interviews were audiotaped, transcribed verbatim and translated into English for thematic content analysis. **RESULTS:** A total of 3 themes were identified from the interview analysis: 1) positive attitude towards spiritual ways of healing for cancer treatment, 2) concerns about the safety and efficacy of T&CM for cancer treatment; and 3) concerns towards the legitimacy of the claims made by traditional practitioners. Patients were willing to try non-invasive treatments such as prayers, spiritual and faith healing therapies for cancer treatment. Lack of a fixed dosing system, unknown side effects and substandard methods of preparation were other reported reasons for rejecting T&CM use. The respondents showed a great concern towards the authenticity of claims made by traditional practitioners and the majority demanded that true and fair claims should be made by traditional practitioners in order to help patients in making decisions regarding cancer therapy. **CONCLUSIONS:** The respondents in this study did not appear to have attitudes regarding TCM that could lead to treatment delays but this may be due to the sampling method. Future studies are needed to evaluate perceptions among those who have defaulted treatment at any stage of cancer. The current study has contributed to a greater understanding of the use of T&CM among cancer patients that are not defaulting treatment.

PCN86

A Q-TWIST ANALYSIS COMPARING PANITUMUMAB PLUS BEST SUPPORTIVE CARE (BSC) WITH BSC ALONE IN PATIENTS WITH WILD-TYPE KRAS METASTATIC COLORECTAL CANCER

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OBJECTIVES: New treatment improves efficacy and often has toxicities. The quality-adjusted time without symptoms of disease or toxicity (Q-TWiST) analysis incorporates survival, toxicities and quality of life into a single metric providing an integrated measure of clinical benefit. Objective of this study was to use Q-TWiST analysis comparing quality-adjusted survival between patients with chemo-refractory wild-type KRAS metastatic colorectal cancer (mCRC) receiving panitumumab + best supportive care (BSC) versus BSC alone. Because the trial design allowed patients on BSc arm to receive panitumumab after disease progression, which may have confounded overall survival (OS), the focus of this analysis was on progression-free survival (PFS). **METHODS:** The time spent in the toxicity (grade 3 or 4 adverse events; TOX), time without symptoms of disease or toxicity (TWiST), and relapse (after disease progression; REL) states were estimated, and adjusted using utility weights derived from patient-reported EQ-5D measures. Quality-adjusted PFS was when the utility for REL was zero in the Q-TWiST analysis. Sensitivity analyses were performed in which utility weights (varying from 0 to 1) were applied to TOX and REL health states. **RESULTS:** The trial included 463 patients, KRAS status ascertained in 427 (92%) of patients. Of these, 243 (57%) having wild-type KRAS tumours (124 panitumumab + BSC, 119 BSC alone) were included in the analysis. Statistically significant difference between groups in quality-adjusted PFS favoured panitumumab + BSC (12.3 weeks versus 5.8 weeks, respectively, $p<0.0001$). The difference continued to favour panitumumab + BSC for all hypothetical utility weights applied to the TOX health state in sensitivity analyses. Although OS was confounded by 76% of patients in the BSC alone arm receiving panitumumab after disease progression, the difference in quality-adjusted OS was also statistically significant and favoured panitumumab + BSC. **CONCLUSIONS:** In patients with chemo-refractory wild-type KRAS mCRC, panitumumab + BSC significant improved quality-adjusted survival compared with BSC alone.

PCN87

HOW DOES PATIENT-REPORTED OUTCOME DATA INFLUENCE THE CLINICAL DECISION MAKING OF PRACTICING ONCOLOGISTS?

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OBJECTIVES: Our objective was to understand how oncologists view patient-reported outcomes (PROs) and whether PRO data influences their clinical decision making. **METHODS:** Twenty oncologists participated in 1 of 4 semi-structured focus groups (5 per group). Topics for discussion included: relative value of PROs compared to other efficacy outcomes, impact of PROs on clinical decision making, and interpretation of PRO data. Transcripts were analyzed using Atlas.ti software. **RESULTS:** The oncologists represented a diverse sample in terms of gender (55% male), years in practice (4-25), practice type/size, and tumor specialty. Most oncologists had no experience with PROs, but were able to identify several concepts appropriate for PRO assessment (e.g., symptoms and functioning). All oncologists agreed that when treating curable disease, clinical efficacy (overall survival, progression free survival) and toxicity were the main drivers of clinical decision making. In the non-curative setting, all agreed that PRO data, particularly health-related quality of life data becomes paramount as a driver of treatment decision making. Some oncologists felt that patient-reported symptoms were on a par with toxicology, and saw a benefit to supplementing toxicity data with PRO data. All agreed that patients were the best source of data regarding symptoms and that many symptoms were consistent across tumor types. Concern over the subjectivity and interpretability of PROs, however, was expressed and most oncologists stated a preference for common toxicity criteria and performance status measures (e.g., Karnofsky). Most oncologists agreed that clear and concise reports of PRO data with clear explanations of the scale used and interpretability of change would increase their likelihood of reviewing PRO data. **CONCLUSIONS:** Oncologists prioritize clinical efficacy endpoints in their treatment decision making; however, in the non-curative setting PRO data becomes more influential. Improving the interpretability of PRO measures could increase the use of PRO data in treatment decision making.

PCN88

ATTITUDES OF YOUNG WOMEN ON HUMAN PAPILLOMA VIRUS VACCINATION

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OBJECTIVES: This study evaluated knowledge and attitude towards human papilloma virus (HPV) vaccination among women ages 18-24 years and examined predictors of attitude towards HPV vaccination. **METHODS:** A cross-sectional, self-administered questionnaire was delivered to a convenience sample of female University students in 2009. Questions on knowledge (9 items) and attitude (2 items) were measured using a 5-point Likert scale. The instrument also included questions on demographics, HPV vaccination status, source of HPV-related information, and healthcare professional's recommendation. For the purpose of modeling, knowledge (yes/no) and attitude (positive/negative) was reduced to a binary variable. Data was coded and analyzed using SAS v9.2, by conducting descriptive analyses, chi-square tests and logistic regression. **RESULTS:** A total of 136 subjects completed the survey with a response rate of 46.5%. The mean age of the sample was 20.67($\pm$1.78) years with the majority being unmarried (88.97%) and insured (72.06%). HPV vaccination rate was 11%. The mean summary knowledge score was 4.4 ($\pm$3.0) with a reliability coefficient of 0.7. The mean summary attitude score was 2.7 ($\pm$1.2) with a reliability coefficient of 0.8. In the logistic regression model, health care professional's recommendation to administer HPV vaccine was a significant predictor of positive attitude towards the vaccine (OR=2.886, 95% CI=1.186-7.020, $p<0.05$) after controlling for race, education, age, knowledge, and vaccination status. **CONCLUSIONS:** A healthcare professional's recommendation to consider the HPV vaccine was a significant predictor of attitude towards the vaccine. Suboptimal knowledge and negative attitude towards HPV vaccination underscore the need for active education and accurate dissemination of information to women regarding HPV vaccination.

PCN89

HTA AGENCIES' PREFERENCES REGARDING QUALITY OF LIFE MEASURES FOR PROSTATE CANCER CLINICAL TRIALS

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OBJECTIVES: Inform clinical trial designs with regards to Health Technology Assessment (HTA) agencies' preferences regarding Quality of Life (QoL) measures for prostate cancer. **METHODS:** We searched the Centre for Reviews and Dissemination database and HTA Watch® for any publication by an HTA agency on prostate cancer and QoL using the search string "prostate cancer AND QoL OR quality of life. **RESULTS:** We identified 19 HTAs. Four HTAs evaluated drug treatments, 14 evaluated procedures and one evaluated screening. The year of publication ranged from 1996 to 2007. UK agencies published eight of the HTAs, including the four evaluating drugs, a Norwegian agency published three, and agencies in France, Spain and the US each published two, with the remaining HTA published by a German agency. The results of the HTA review demonstrate a consensus regarding a lack of

evidence on QoL and long-term survival for prostate cancer patients, including those with castration-resistant prostate cancer (CRPC). The HTAs recommend randomized clinical trials with sufficient follow-up to measure benefits in terms of overall survival. The trials should include QoL measurements to establish trade-offs between potential adverse events and benefits of treatment. **CONCLUSIONS:** A lack of evidence on QoL for prostate cancer patients is largely responsible for an absence of specific recommendations from HTAs on QoL measures for prostate cancer. This has created uncertainty regarding HTA agencies' preferred QoL measures. Several current randomized clinical trials for CRPC will advance significantly the QoL evidence pool for prostate cancer.

PCN90

PRO INSTRUMENTS USED TO MEASURE SYMPTOM IMPACTS OF FATIGUE AND PAIN IN PROSTATE CANCER DRUGS TRIALS

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OBJECTIVES: Understand what fatigue and pain-specific PRO instruments are being used in the most recent clinical trials for recently approved prostate cancer drugs. **METHODS:** We searched the ClinicalTrials.gov database. Searches were limited to drugs recently approved by the FDA and EMA (cabazitaxel, docetaxel, degarelix, histrelin, bicalutamide, leuprolide, leuprorelin, triptorelin), but not to any specific prostate cancer stage. The search terms used were "quality of life OR QOL OR patient reported outcome" (outcome measure) and "prostate cancer" (for condition). Phase I trials were not considered. We supplemented the search with reviews of EMA or CMDh drug labels for PRO information. The search was validated with a Medline search using the above limitations and search terms, limited to articles published since 1 January 1999. **RESULTS:** 67 clinical trials with PROs or QoL were identified, 33 docetaxel, 14 bicalutamide, 13 leuprolide/leuprorelin, 5 degarelix, 2 triptorelin and 1 cabazitaxel. The MOTIF trial, to determine the efficacy of modafinil in alleviating fatigue in PC patients undergoing docetaxel-based chemotherapy, was the only trial to assess fatigue. FACIT-F and SOMA were the PRO instruments used. Two docetaxel trials and the cabazitaxel trials were the only ones to have used a pain-specific PRO, the PPI item from the McGill Pain Questionnaire, to measure this symptom. **CONCLUSIONS:** Despite the ubiquity of fatigue as a side effect of both hormonal therapy and chemotherapy for prostate cancer, only one trial assessed this symptom with a dedicated PRO instrument. Although pain can be one of the most debilitating symptoms associated with prostate cancer, only three trials used a dedicated PRO instrument to assess this symptom. It is unclear why more PC trials do not use fatigue and pain-specific PRO instruments.

PCN91

ARTHRALGIA AND PATIENT-REPORTED OUTCOMES IN POSTMENOPAUSAL WOMEN WITH EARLY BREAST CANCER TAKING AROMATASE INHIBITORS: LONGITUDINAL ANALYSES

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OBJECTIVES: To prevent cancer recurrence, each year over 100,000 US women begin a 5-year course of aromatase inhibitors (AIs) for early-stage breast cancer. AI-related joint pain (arthralgia) may interfere with patients' well-being in several domains. There is no arthralgia measurement tool validated in this population specifically, and more information is needed about the impact of arthralgia on patient-reported outcomes (PROs) in these patients. We sought to assess relationships of arthralgia with PROs over the 1st 12 weeks of AI therapy. **METHODS:** Postmenopausal female oncology outpatients with early stage breast cancer (N=52, pilot sample of the Breast Cancer Adjuvant Therapy cohort) completed paper surveys prior to AI initiation, and every 2 weeks thereafter for 12 weeks. Pain was measured in 16 joint locations using a 0-10 numeric rating scale. Baseline covariates included age, comorbidities, existing major depressive disorder (PHQ-2), social support (DUFSS), performance status (ECOG), and menopausal symptoms (FACT-ES). Time-varying PROs examined included physical function, sleep disturbance, pain interference, and emotional distress (depression), all of which were measured using PROMIS static short forms. We used mixed models to analyze arthralgia and PROs. **RESULTS:** Mean age was 62 years (SD=10). The majority of women had active performance status (n=46) and no major depression (n=47) at baseline. Median worst pain in any joint prior to AI initiation was 1 out of 10 (interquartile range=0-5). Adjusting for baseline covariates, greater arthralgia was associated with worse physical function (β=−0.09[−0.13, −0.04]), greater pain interference (β=0.15[0.09,0.20]), and greater emotional distress (β=0.06[0.01,0.11]) but not with sleep disturbance (β=−0.01[−0.03,0.004]). **CONCLUSIONS:** These preliminary findings will be used to develop and validate the Patient-Reported Arthralgia Inventory, toward improving arthralgia measurement. Our findings contribute to understanding how arthralgia relates to PROs over the 1st 12 weeks of AI therapy. Targeted AI adherence interventions will rely on comprehensive longitudinal PRO information.

PCN92

PSYCHOMETRIC COMPARISION OF THE EQ-5D-3L TO THE EQ-5D-5L IN CANCER PATIENTS IN KOREA

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OBJECTIVES: The purposes of this study were to investigate redistribution properties of EQ-5D-5L and to compare the validity and reliability of each EQ-5D version for Korean cancer patients. **METHODS:** Patients visiting one ambulatory cancer center self-administered the two EQ-5D versions and EORTC QLQ-C30 questionnaire. Redistribution properties are examined between EQ-5D-5L and EQ-5D-3L. Convergent validity of these two versions was evaluated by comparing EQ-VAS, ECOG performance status and EORTC QLQ C30 subscales. Discriminant ability was evaluated based on Shannon index and ceiling effect and test-retest reliability was evaluated using kappa statistics and intraclass correlation coefficient. **RESULTS:** Inconsistent rate was 3.5% between two versions. In convergent validity, EQ-5D-5L demonstrated similar or higher correlations with EQ-VAS, ECOG performance status and EORTC QLQ-C30 compared with EQ-5D-3L. Absolute informativity in EQ-5D-5L was improved but relative informative is similar to the EQ-5D-3L. Ceiling effect was decreased from 16.8% in the 3L version to 9.7% in the 5L version. Agreements by Kappa were fair to good in 4 dimensions except usual activities in both EQ-5D instruments. Intraclass correlation coefficient of EQ-5D-$5L_{index}$ was 0.77. **CONCLUSIONS:** The EQ-5D-5L version appear a valid and reliable quality of life instrument in cancer patients. EQ-5D-5L enhanced descriptive richness and diminished ceiling effect compared with EQ-5D-3L.

PCN93

ATTACHMENT STYLE AND HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH PROSTATE CANCER

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OBJECTIVES: Attachment style, or ability to be self-reliant and trust others, categorized as secure, preoccupied, dismissing or fearful, is related to health outcomes. Individuals successfully seeking social support can better cope with negative events. The attachment style of gay men may affect their ability to be public about their sexual orientation and seek support, which could affect their health-related quality of life (HRQOL). We assessed variation in the attachment style of gay men with prostate cancer and its relationship with HRQOL. **METHODS:** Participants (N=91) were from a convenience sample of gay men with localized prostate cancer. HRQOL was measured using the Short Form-36 (SF-36) (v1.0) and the Expanded Prostate Cancer Index Composite (EPIC); the attachment style was scored using the Relationship Questionnaire. Differences in attachment style were assessed using ANOVA. Multiple regression models were run to predict the SF-36 physical (PCS) or mental (MCS) components. **RESULTS:** Individuals with dismissing attachment style had lower social network scores and indicated higher bowel symptom bother, though their bowel function was higher than that of fearful individuals ($p<0.05$). Dismissing individuals were more comfortable being public about their sexual orientation than preoccupied individuals; had a higher MCS, but did not differ on PCS than fearful individuals. After adjusting for demographics, social support, especially size of social network, predicted the MCS; while bowel functioning, urinary/sexual bother, and comfort with being public about their sexual orientation predicted the PCS on the SF-36 ($p<0.05$). **CONCLUSIONS:** Social network may vary by attachment style, affecting psychosocial adjustment. Interventions should use attachment style as a marker for limited social support and poor long-term HRQOL to identify gay men with prostate cancer needing additional assistance.

PCN94

HEALTH-RELATED QUALITY OF LIFE (HRQOL) IN 1ST LINE NON-SQUAMOUS NON-SMALL CELL LUNG CANCER (NSCLC) PATIENTS IN A REAL LIFE SETTING: BEVACIZUMAB-BASED VERSUS NON-BEVACIZUMAB BASED THERAPY IN A EUROPEAN PILOT STUDY

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BACKGROUND: Bevacizumab has been used in first line NSCLC in Europe since its regulatory approval in 2007. Bevacizumab has demonstrated significantly improved survival in randomized phase III trials. However, no HRQoL outcomes have been reported so far. **OBJECTIVES:** To investigate the comparative HRQoL of bevacizumab-based therapy versus non-bevacizumab based therapy in 1st line non-squamous NSCLC in two European countries. **METHODS:** Data were drawn from the Adelphi NSCLC Disease Specific Programme, a large cross-sectional study of consecutively presenting patients in France and Germany in 2010. Physicians provided retrospective information regarding disease status and treatment patterns, with matched patients invited to complete a questionnaire including the EQ-5D and FACT-L instruments. Propensity scoring methods were used to match the two comparison groups on confounding variables including age, performance status and time since diagnosis. A t-test was used to assess the relationship between current treatment and quality of life. **RESULTS:** 363 non-squamous patients receiving first line treatment were analysed, of which 132 were currently receiving bevacizumab-based therapy and 231 were currently receiving non-bevacizumab-based therapy. The quality of life scores using the FACT-L instrument (based on the matched samples) were 77.3 for bevacizumab patients (95% CI 73.7 to 81.0) compared with 74.1 for non-bevacizumab patients (95% CI 70.9 to 77.33), p=0.19. The EQ-5D scores for Progression-Free Survival were 0.68 for the bevacizumab group (95% CI 0.63 to 0.74) and 0.66 for the comparative patients (95% CI 0.62 to 0.71), p=0.57. **CONCLUSIONS:** This real-life pilot study shows that bevacizumab-based therapy does not have any detrimental effect on HRQoL as measured by the EQ-5D and the FACT-L.